

TITLE PAGE.

HOWARD KAPPLE.  
1927 FAIRMEADOWS DR.  
BETTENDORF IOWA 52722.

PRECISION AID.

Eye drop aid.

A device for giving yourself eye drops easily fast and precise without waste or contamination of the drops.

2025-04-04 10:40:00

## PRECISION AID.

### BACKGROUND.

EZY CARE DROP AID has a cup that fits over the eye to deliver eye drops. The other end of this cup has a port that the eye drop bottle fits in. The drops must go clear through the cup to be delivered into the eye. The interior of the cup of course retains a residual amount of the medication ment for the eye. Also the cup would have to be sanitized constantly to avoid contamination. With the eye covered over one would wonder if the drop reach the eye and how many.

The EYE DROP GUIDE is a plastic cradle that the eye drop bottle fits in. The cradle has a pointed projection under the nipple of the bottle that is placed on the cheek bone below the eye and pressed downward to pull the bottom eye lid down as you squeeze the drop into the eye. As you can see this has a safety hazard of poking yourself in the eye with the projected point while searching for the cheek bone.

FIRST DROP is another cradle device that the drop bottle fits in and it comes in three different sizes for different size bottles. It also requires seeking out bone features of the face to locate the eye. I think perhaps the safety of this invention is also wanting. It depends to much on a person wandering about the face locating the proper features of the face around the eye.

## PRECISION AID.

## SUMMARY.

A device for delivery of eye drops to the center of the eye every time all by yourself. It is as fast as putting on a pair of eye glasses and tipping the eye drop bottle over the eye while holding your head back. It puts the drops in the center of the eye every time directly without touching anything else along the way eliminating the chance of contamination and infection. Keeping Precision Aid clean is as easy as washing your eye glasses. Just use soap and water after use.

## PRECISION AID.

### DISCRIPTION OF THE PREFERRED EMBODIMENT.

Precision Aid is a device for giving yourself eye drops in the center of the eye every time. Because eye glasses are so precise in their service to the eyes as to positioning over the eyes I decided they would be perfect for mounting my Precision Aid onto.

To make a device to give yourself eye drops I first cut the bottom half of the eye glass frame off and discarded the glass lenses. With the lenses and the bottom frame removed their is room for one to pull down the lower eye lid with one hand while the other hand delivers the drop. I used  $\frac{5}{64}$ " copper wire to make what I call a key slot assembly one for each eye. The slots at the bottom of the key slot assembly where the eye drop bottle rests is  $\frac{1}{4}$ " wide to fit the nipple of the bottle. Once the bottle is in the slot it cannot move about while waiting for the drop. The key slot assembly is triangular shaped at the top to funnel downward the eye drop bottle into the slot at the bottom of the key slot.

The key slot assemblys part (2) on page 1 of the prints are shown anchored to the bottom side of the brow bar (1) of the frame. These assemblys are are angled outward in front of the brow and away from the eyes  $\frac{1}{4}$ ". Add this  $\frac{1}{4}$ " to the normal clearance of the glass frame to the eyes and we now have at least a  $\frac{1}{2}$ " or more clearance of the eye drop bottle above the eye for safety. From the bottom of the brow bar to the inside of the key slot where the tip of the eye drop bottle sets is  $\frac{6}{8}$ ". This positions the eye drop bottle over the center of the eye top to bottom. To center the bottle left to right I measure from the center of the nose saddle (C) on print 1 out to the left and to the right  $1\frac{1}{4}$ " to the center of the key slots also shown with a (C). Print page 4 Fig. (1) shows the template that I use to locate where the four  $\frac{5}{64}$ " hole that hold the key slots are to be drilled. I line up the (C) on the template with the (C) on the nose saddle and mark the hole locations on the bottom of the brow bar. The holes are drilled from the bottom of the brow bar almost all the way through. The copper key slots are  $\frac{5}{64}$ " wire and the holes are the same size so we have a tight fit. Prints 2 and 3 show the  $\frac{1}{4}$ " protrusion of the key slots in front of the brow bar.

### MAKING THE KEY SLOT ASSEMBLYS

Print 4 shows Fig. 2 and Fig. 3 a picture of the bench block that I make the key slot assemblys on. I first cut the copper wire in lengths of  $2\frac{3}{8}$ " to make the key slot assemblys. I bend the copper wire in the middle around the post in the center of the bench block this makes the slot for the bottle to rest in. I then extends the ends between the two pins on top of the bench block which are  $\frac{1}{2}$ " apart and spread the ends of the key slot so they are 1" apart on center. This part of the key slot forms the triangular funnel that guides the drop bottle down into the slot at the bottom. The two ends of the key slot assembly are then bent down over the edge of the bench block  $\frac{1}{4}$ " as shown on print 4 Fig. 5. Print 4 Fig. 4 shows the front veiw of the key slots. The key slots are  $\frac{1}{4}$ " wide where the eye drop bottle rests.

## PRECISION AID.

### SPECIFICATIONS:

Put on the PRECISION AID and tilt head back or lay down to receive drops. Pull lower eye lid down on the eye to receive the drops.

Close the eye not receiving the drops so that you can see the key slot to put the drop bottle in for the eye receiving the drop.

If you look down at the tip of the eye drop bottle delivering the drop you will see the drop going into the eye.

To guard against contamination the key slots are washed off after each use with soap and water like you would your glasses to prevent infection.

Using PRECISION AID is fast and easy and precisely in the center of the eye every time with no waste of drops.